

Chapter 4 Employment

Key Points

- The Territory workforce of around 100 000 people is typically young, mobile and transient, and includes approximately 8 000 Indigenous participants on the CDEP program. In addition, there are approximately 5 500 defence force personnel resident in the Territory who are not included in workforce estimates.
- The past decade has seen the creation of about 20 000 non-defence force jobs in the Territory.
- Participation rates are typically close to, or about, 70 per cent and the unemployment rate typically in the 4-6 per cent range, both better than national averages.
- The Territory's labour force is heavily dependent on large interstate migration flows to overcome skills and expertise shortages, and to meet the short to medium term employment demands of major infrastructure projects.
- Recent employment growth has been negative (-0.1 per cent in 2002-03 and an estimated -1.4 per cent in 2003-04) following completion of the Alice Springs to Darwin rail link.
- Employment is forecast to increase by 2.9 per cent in 2004-05, boosted by work associated with the construction of the Wickham Point liquefied natural gas (LNG) plant, and stronger tourism-related employment.

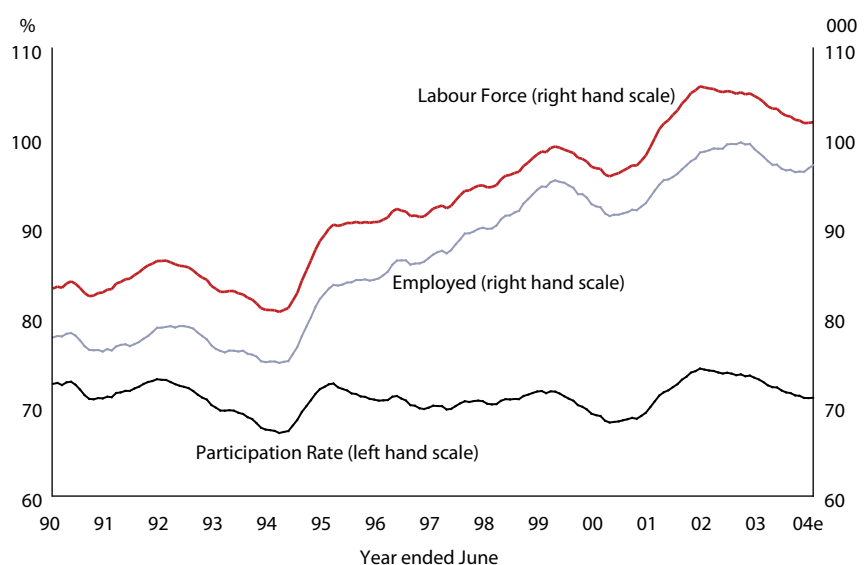
Employment

Labour is a major input in the production of goods and services. As such, the demand for labour is derived from the demand for goods and services, the cost of labour relative to capital and the amount of output per unit of labour (that is, productivity). Employment growth tends to follow output growth.

The Territory Workforce

The Territory's labour market profile differs significantly from that of Australia, largely as a result of remoteness, transience and seasonality of demand. Compared with the rest of Australia, the Territory attracts a disproportionately large number of young, mobile workers, who often view their stay as short to medium term.

Chart 4.1: Territory Labour Market (moving annual average)



e: estimate
Source: NT Treasury, ABS Cat. No. 6202.0

Large interstate migration flows mean that some 8 to 10 per cent of the Territory's population changes each year, around four times the level in any other jurisdiction (apart from the Australian Capital Territory). The transience of the Territory's youthful workforce, combined with issues of remoteness, increases staff turnover rates and imposes significant recruitment and training costs on employers. High turnover also results in a continual loss of expertise, often leading to skill shortages in the Territory labour force.

Skill Shortages

High turnover is reflected in Territory job vacancy rates for both skilled and unskilled positions, which tend to be higher in the Territory relative to its proportion of national employment.

There continue to be labour shortages in a number of industry sectors, notably food, hospitality and tourism (as that sector recovers), sales, cleaning and clerical sectors over the past couple of years. Skill shortages are exacerbated as major projects such as the Alice Springs to Darwin rail link and the construction of the liquefied natural gas plant proceed. Projects of this magnitude tend to attract local skilled labour (including a considerable amount of skilled labour already employed). Given the Territory's typically low unemployment levels, this limits the excess supply of labour available for employers to access.

Therefore, given the small size of the Territory's labour force, the construction phase of large resource and infrastructure projects tends to result in large swings in employment growth.

Data Quality

There are factors that can act to reduce the accuracy of labour force data and as a result data often contain confusing signals. Particularly in smaller jurisdictions such as the Territory, labour force survey results are volatile and contain large standard errors due to sample size.

Employment data in this chapter are derived by the Australian Bureau of Statistics (ABS) from a sample survey of households, with standard errors calculated to assist users to understand the accuracy of sample-based employment data. In the Territory, standard errors as a percentage of total employment are typically around four times higher than nationally. For instance, in 2002-03, average employment was 98 300 (see Table 4.1). This figure has an estimated standard error of 1.4 per cent, so there is a 95 per cent chance that the true estimated employment was in the range of 95 500 and 101 100 range. Interpretation of Territory employment statistics should recognise the relatively high levels of uncertainty associated with these statistics.

Data Aggregation

Data aggregation is used to reduce the impact of data volatility to aid interpretation and analysis. While this is useful when analysing time series data, it diminishes the ability to identify 'turning points' in trends as they occur. In addition, trend data has its own reliability issues, with the most recent data observations tending to be volatile.

Employment by Industry

The ABS Labour Force Survey (LFS), which produces official employment statistics, is a sample household survey and does not directly measure the whole population. This produces uncertainty in the labour force statistics and results in particularly volatile Territory employment data, the extent of which is accentuated as the level of data disaggregation increases (such as employment data broken down by industry). Employment data from the Census of Population and Housing does not contain the same level of inaccuracies, given that the entire population is enumerated. However, Census data may contain coding and response biases from which LFS data are free.

Table 4.1: Territory Labour Force and Employment (annual average)

Year Average year ended June	Civilians 15 and Over		Labour Force		Participation Rate	Employed Persons		Unemployment Rate
	000	% Ch	000	% Ch		000	% Ch	
1984	93.5	5.6	62.9	-1.1	67.4	58.0	-2.3	7.8
1985	99.6	6.5	65.7	4.3	65.9	61.1	5.2	7.0
1986	105.4	5.8	75.1	14.4	71.2	69.6	14.0	7.3
1987	109.2	3.6	78.2	4.1	71.6	73.3	5.3	6.2
1988	110.1	0.9	74.4	-4.8	67.6	67.2	-8.4	9.8
1989	111.9	1.6	80.9	8.7	72.2	75.6	12.5	6.5
1990	114.7	2.5	83.2	2.8	72.5	77.7	2.8	6.5
1991	116.8	1.9	83.0	-0.1	71.1	76.4	-1.7	8.0
1992	118.2	1.1	86.2	3.8	73.0	78.8	3.1	8.6
1993	119.0	0.7	83.1	-3.6	69.9	76.4	-3.0	8.1
1994	119.9	0.8	80.8	-2.8	67.4	75.0	-1.8	7.1
1995	123.5	2.9	89.1	10.4	72.2	82.6	10.1	7.3
1996	128.3	3.9	90.6	1.7	70.6	84.3	2.1	7.0
1997	131.4	2.5	92.1	1.6	70.1	87.0	3.2	5.6
1998	134.4	2.2	94.5	2.6	70.3	89.8	3.3	4.9
1999	137.3	2.2	98.5	4.3	71.7	94.5	5.3	4.0
2000	139.9	1.9	96.6	-1.9	69.0	92.3	-2.3	4.4
2001	141.5	1.1	99.0	2.5	69.9	93.4	1.1	5.6
2002	142.5	0.7	105.6	6.7	74.1	98.4	5.4	6.8
2003	143.0	0.3	104.4	-1.1	73.0	98.3	-0.1	5.8
2004e	143.2	0.1	101.7	-2.6	71.0	96.9	-1.4	5.2
Compound Annual Growth %								
1983-84 to 2003-04e		2.2	2.4				2.6	
1983-84 to 1988-89		3.7	5.1				5.4	
1988-89 to 1993-94		1.4	0.0				-0.1	
1993-94 to 1998-99		2.7	4.0				4.7	
1998-99 to 2003-04e		0.8	0.7				0.5	

Employment

e: estimate

Source: NT Treasury, ABS Cat. No. 6202.0

Community Development Employment Projects

A significant proportion of Aboriginal and Torres Strait Islanders in the Territory are employed part-time under the Community Development Employment Projects (CDEP) program, which has been administered by the Aboriginal and Torres Strait Islander Commission and which began as a 'work for the dole' community development scheme. Under International Labour Organisation definitions, CDEP participants are reported as employed.

Participants in the CDEP program work in community development initiatives in return for a wage at least equivalent to the unemployment benefit. The vast majority of employment among Aboriginal and Torres Strait Islanders living in remote communities is connected to CDEP. In the past eight years, CDEP participant numbers (ATSIC) have increased from around 6 000 to almost 8 000, as CDEP programs are initiated or expanded in urban centres of the Territory.

2004-05

Employment

1994 to 1999

Coinciding with a strong phase of economic growth, in the five years to June 1999, Territory employment experienced remarkably strong growth. Annual average employment increased from 75 000 in 1994 to 94 500 in 1999, an average annual growth of 4.7 per cent, and the unemployment rate fell from 7.1 per cent to 4.0 per cent over the same period. Strong economic and population growth in this period was largely attributable to the defence relocation program and associated investment and employment across many industry sectors, notably the services sectors.

1999 to 2001

The subsequent deterioration in the Territory labour market was the result of a downturn in economic growth associated with the tailing off of activity related to the defence force relocation program. Construction activity slowed dramatically, affecting population growth as interstate migration switched from a positive inflow to a net outflow. The downturn in investment and consumption in the Territory contributed to the weaker demand for labour.

2001 to 2002

Territory employment growth strengthened in 2001-02, as a pick up in private consumption expenditure and direct and indirect employment opportunities related to the construction of the Adelaide to Darwin railway more than offset the downturn in the tourism sector. However, the improvement was predominantly driven by part-time employment growth, with full-time employment remaining weak, suggesting that businesses remained cautious about the strength of the economic recovery.

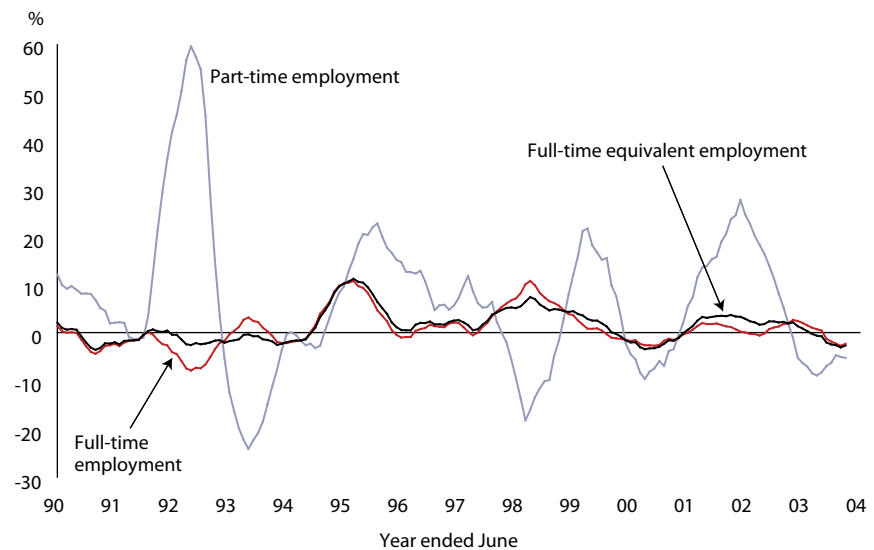
2002 to 2003

In year on year terms, employment decreased by 0.1 per cent in 2002-03. Following the initial and significant boost from the railway, employment growth slowed and remained weak as jobs related to the construction phase of the railway continued to fall back, in line with railway construction coming to an end. Tourism-related employment remained weak in 2002-03, reflecting geopolitical conditions and international health and safety concerns.

2003 to 2004

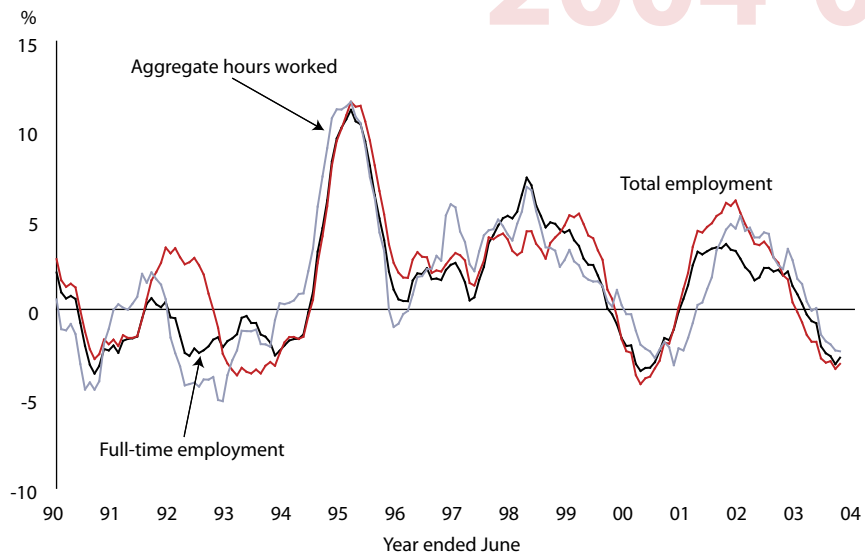
Employment is estimated to have fallen by 1.4 per cent in 2003-04, again affected by declining railway-related employment and continued weakness in the tourism sector. However, trend employment is showing consistent signs of improvement in the latter half of 2003-04, boosted by the start of construction work for Bayu-Undan stage two.

Chart 4.2: Territory Employment Growth (moving annual average, annual percentage change)



Source: NT Treasury, ABS Cat. No. 6202.0

Chart 4.3: Employment and Hours Worked Growth (moving annual average, annual percentage change)



Source: NT Treasury, ABS Cat. Nos 6202.0, 6291.0.55.001

For illustration purposes, Treasury converts part-time employment to full-time equivalent to give a better measure of changes in the real demand for labour. Based on an indicative 17.5 hours per week per part-time worker, Treasury estimates that full-time equivalent employment growth weakened in 2003-04. The moderation in full-time equivalent employment is supported by the aggregate hours worked data (see Chart 4.3). Growth in aggregate weekly hours worked fell from 5.2 per cent in 2001-02 to 1.7 per cent in 2002-03, and is estimated to have recorded negative growth in 2003-04. As in 2002-03, growth in hours worked outpaced estimated full-time equivalent employment growth in 2003-04, indicating that more overtime was worked by full-time employees and extra hours by part-time employees, as employers remained unsure of the strength of the pick up in the broader economy.

Employment

Table 4.2: Full and Part-time Employment (year average)

	Number (000)			Year on Year			Unemployment	
	Year to March 2004			% change			Rate %	
	Full-time	Part-time	Total	Full-time	Part-time	Total	Year to March 2003	Year to March 2004
New South Wales	2 297.3	860.7	3 158.0	1.4	1.9	1.5	6.0	5.7
Victoria	1 673.8	688.2	2 362.0	0.6	2.8	1.3	5.8	5.7
Queensland	1 300.1	527.2	1 827.3	3.3	3.0	3.2	7.3	6.5
South Australia	497.2	220.1	717.3	2.5	1.8	2.3	6.4	6.4
Western Australia	682.0	284.8	966.8	3.4	-2.0	1.7	6.1	5.9
Tasmania	144.1	64.2	208.4	4.6	3.5	4.3	8.8	7.3
Northern Territory	72.7	23.5	96.2	-2.3	-5.2	-3.0	5.3	5.6
Australian Capital Territory	128.0	47.5	175.5	-2.7	7.6	-0.1	4.4	4.0
Australia	6 795.3	2 716.2	9 511.5	1.8	2.0	1.8	6.3	5.9

Source: NT Treasury, ABS Cat. Nos 6202.0, 6291.0.55.001

The ANZ job ads series suggests the Territory jobs market is improving, with advertisements in 2003-04 estimated to be slightly higher than in the previous two years. In addition, Department of Employment and Workplace Relations (DEWR) data report a pick up in the actual number of Territory vacancies, and the Skilled Vacancies Index is estimated to have increased by about 10 per cent in 2003-04. While there is a significant structural component to the level of skilled vacancies in the Territory, the recent increase in the index is also likely to reflect both supply constraints associated with increased net interstate migration outflows and strengthening demand for labour.

Employment by Industry

Public Sector Employment

Employment in the Territory is dominated by the public sector. This relates to the developing status of the economy, administrative scale issues associated with serving a small and dispersed population and a large defence presence.

The Territory's major employment-providing industries are government administration; retail trade; health and community services; property and business services; education; construction; accommodation, cafes and restaurants; and transport and storage. Based on Census information, these eight industries accounted for around 70 per cent of Territory employment in 2000-01. Defence is estimated to have comprised more than 5.0 per cent of total Territory employment, following compound annual growth of 6.8 per cent over the previous 15 years.

Table 4.3: Territory Employment by Industry

Industry	Employment Level ^(a) (000)				Compound Annual Growth Rates				Percentage of Total	
	1986	1991	1996	2001	1986- 1991	1991- 1996	1996- 2001	1986- 2001	1986	2001
Agriculture, forestry and fishing	2.6	3.1	2.7	3.0	3.6	-2.9	2.6	1.1	3.8	3.2
Mining	3.1	3.0	3.2	2.4	-0.6	1.3	-5.3	-1.6	4.5	2.5
Manufacturing	2.9	3.8	4.0	4.4	5.8	0.9	2.2	3.0	4.2	4.6
Services (excluding defence)	57.5	64.7	74.3	80.9	2.4	2.8	1.7	2.3	84.5	84.1
Electricity, gas and water	0.7	0.8	0.6	0.9	4.6	-6.9	7.7	1.6	1.0	0.9
Construction	6.8	5.0	6.7	6.1	-6.0	6.2	-1.9	-0.7	9.9	6.3
Wholesale trade	2.7	3.1	3.4	3.6	3.2	1.5	1.1	1.9	3.9	3.7
Retail trade	7.8	9.5	10.0	11.7	3.8	1.2	3.2	2.7	11.5	12.2
Accommodation, cafes, restaurants	3.3	5.0	5.6	5.9	8.6	2.2	1.3	4.0	4.9	6.2
Transport and storage	3.5	4.2	4.4	5.2	3.6	1.0	3.2	2.6	5.2	5.4
Communication services	1.6	1.2	1.4	1.1	-6.4	3.9	-4.5	-2.4	2.4	1.2
Finance and insurance	2.0	2.1	1.8	1.7	1.0	-2.8	-1.2	-1.0	2.9	1.7
Property and business services	4.4	5.3	6.9	8.4	3.7	5.6	3.8	4.4	6.5	8.7
Government administration	7.7	8.1	10.4	12.2	1.0	5.2	3.2	3.1	8.4	12.7
Education	5.7	6.0	6.8	7.8	1.0	2.3	3.0	2.1	8.4	8.1
Health and community services	5.2	6.6	10.0	8.7	5.0	8.5	-2.7	3.5	7.7	9.1
Cultural and recreational services	2.1	2.1	2.7	2.9	-0.2	5.4	1.3	2.1	3.1	3.0
Personal and other services	3.9	5.7	3.6	4.7	8.0	-9.0	5.6	1.3	5.7	4.9
Total (excluding Defence)	66.0	74.6	84.1	90.7	2.5	2.4	1.5	2.1	97.1	94.4
Defence	2.0	2.1	3.4	5.4	0.8	9.8	10.0	6.8	2.9	5.6
Total (including Defence)	68.0	76.7	87.5	96.1	2.4	2.7	1.9	2.3	100.0	100.0

Source: NT Treasury, ABS Census of Population and Housing: 1986, 1991, 1996 and 2001

(a) 1996 and 2001 Census employment by industry data includes two irregular items. First is the category 'not stated' whereby the respondent has answered as being employed, but has not identified the industry in which they work. Second, is the category 'not applicable' whereby the respondent has answered as being in the labour force, but has not identified whether they are employed or unemployed. For 1986 and 1991 Censuses 'not stated' data is available, however 'not applicable' has been estimated using the proportion of identified employment by industry in the 1996 Census and 2001 Census. As an estimate of employment, 50% of the 'not applicable' category is assumed to be employed. Therefore, employment not allocated to an industry was 6 280 in 1986, 9 062 in 1991, 7 446 in 1996 and 7 980 in 2001. This employment was weighted through the industry sectors for each Census year. Defence employment has been estimated at 2 000 for 1986.

Construction	Industries have different drivers determining the underlying demand for labour and, in the recent past, employment growth by industry has been mixed. For example, the construction sector has been through a major cycle in the past 10 years and is now in the early stages of an upswing associated with major engineering and building projects under construction or on the horizon. Nonetheless, the longer term outlook will depend on population growth.
Service Industries	As shown in Table 4.3, over the 15 years to 2001 Territory employment (excluding defence) increased at an average annual rate of 2.1 per cent per annum, around 0.2 of a percentage point higher than nationally. As in the rest of Australia, the services sector has driven job creation in the Territory, reflecting strong demand and the labour-intensive nature of services industries. The falling proportion of employment in the traditional 'production' sectors is consistent with a maturing and diversifying economy. Approximately 95 per cent of employment growth was in the services sectors over the past 15 years, and services currently account for around 90 per cent of total Territory employment.
Administration	Strong growth in health and community services employment (3.5 per cent average annual growth over the 15 years to 2001 compared to around 3.0 per cent nationally) partly reflects the need to improve social services in remote and cross-cultural communities and the increasing sophistication of available services. For example, as the population of the Territory has grown there has been an increased capacity to support specialist medical activities, leading to expanded services.
Tourism	Other service industries that exhibited strong growth in the past 15 years include tourism-related services such as accommodation, cafes and restaurants (4.0 per cent per annum), and retail trade (2.7 per cent per annum). However, the recent downturn in the tourism sector has impacted on employment growth in these industries.
Manufacturing	Manufacturing, with an average growth rate of 3.0 per cent per annum, is the only non-service industry in the Territory to experience growth greater than total employment growth over the 15 year period. Further solid employment growth is likely as this industry continues to develop, with liquefied natural gas (LNG) production to commence in 2006, the proposed expansion in alumina production and opportunities associated with the Adelaide to Darwin railway and landbridge concept. Typically, manufacturing accounts for around 5.0 per cent of Territory employment, compared to around 12.0 per cent nationally.
Contracting Industries	Industries in the Territory that have recorded negative average annual employment growth rates over the 15 years to 2001 include mining (-1.6 per cent), communication services (-2.4 per cent) and finance and insurance (-1.0 per cent). These declines somewhat reflect the impact of technology-related productivity gains and the trend toward centralisation.

2004-05

Labour Force

Number Employed or Looking for Work

The labour force – that is, the supply of labour – is defined as ‘persons employed and those looking for employment’. As such, the number of people actively seeking employment (which can vary significantly due to the encouraged/discouraged worker effect) influences the size of the labour force. Generally, the number of people seeking employment is pro-cyclical, as the increased chance of finding work attracts people to the labour force during periods of stronger economic growth and vice versa. The participation rate is the proportion of the civilian population aged 15 years and over in the labour force and is therefore influenced by population levels and demographic structure, as well as the number of people in the labour force.

2002-03

The Territory labour force declined by 1.1 per cent in 2002-03, influenced by weak civilian population growth and a fall in the participation rate (down 1.1 percentage points). This followed strong employment and labour force growth in 2001-02 associated with railway-related employment and a steep increase in the participation rate (up 4.2 percentage points).

2003-04

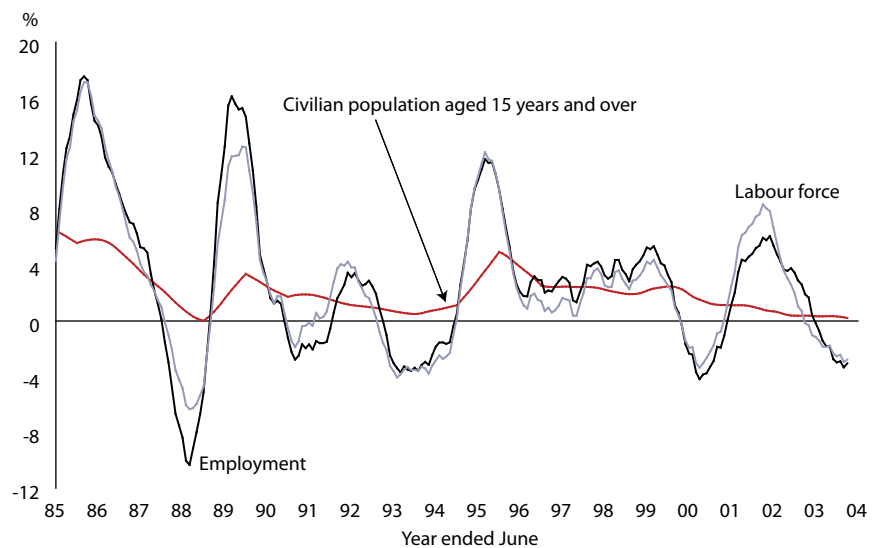
Weak population growth associated with continued net interstate migration outflows is reflected in weak growth in the civilian population aged 15 years and over. Combined with a lower participation rate (down from 73 per cent in 2002-03 to an estimated 71 per cent in 2003-04) this resulted in the labour force declining by an estimated 2.6 per cent in 2003-04.

In 2003-04, year average employment in the Territory is estimated to have decreased by 1.4 per cent to 96 900. The number of people seeking work is estimated to have fallen by 900 to 5 200.

Participation Rate

Labour force participation is typically higher in the Territory than elsewhere in Australia, which reflects the larger proportion of Territory people in the primary working age groups. Nonetheless, at the Territory and national levels, socio-economic changes over the past 30 years have resulted in falling male and increasing female participation rates. This is associated with the general shift toward jobs growth in the services sector and part-time jobs, that coincided with higher female involvement in the labour force.

Chart 4.4: Labour Force Growth (moving annual average, annual percentage change)



Source: NT Treasury, ABS Cat. No. 6202.0

Employment

Female/Male
Participation Rates

In the Territory, the female participation rate increased from about 55 per cent in June 1980 to 64 per cent in June 2003, while the male participation rate declined from 84 per cent to 78 per cent over the same period.

Unemployment

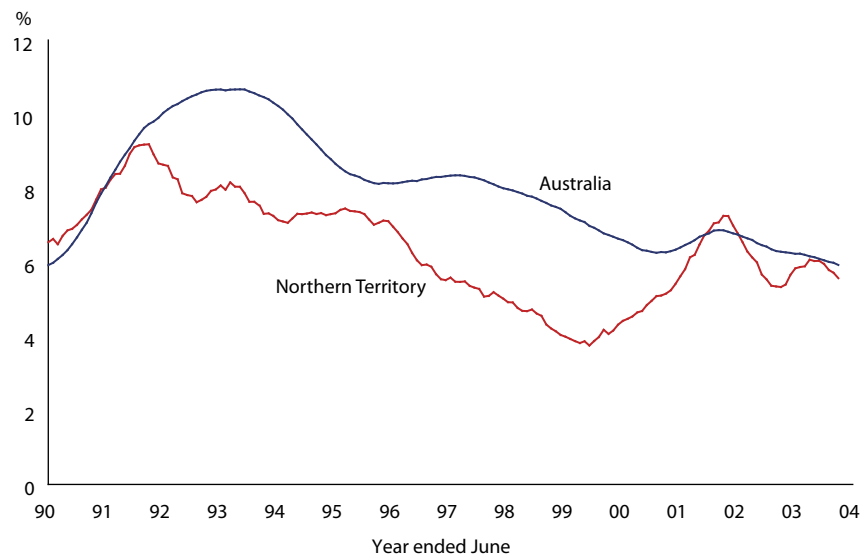
The unemployment rate is the proportion of people seeking employment expressed as a percentage of the labour force. The relationship between the unemployment rate and economic and employment growth is not constant, with changes in participation and productivity acting to influence the unemployment rate. Particularly during the early stages of an economic upturn, increasing productivity can act to constrain employment growth, as previously under-utilised labour is used more intensively.

Decline in
Unemployment Rate

In the Territory, the unemployment rate is estimated to have averaged 5.2 per cent in 2003-04, down from 5.8 per cent in 2002-03 and 6.8 per cent in 2001-02. Nationally, the year average unemployment rate is estimated to have fallen by 0.3 of a percentage point to 5.9 per cent in 2003-04. In 1999-2000 and 2000-01, the prolonged downturn in the Territory economy and the weak job market led to the unemployment rate moving higher. In 2001-02, despite strong employment growth, there was a further deterioration in the unemployment rate, the result of a large reported increase in the participation rate.

In 2003-04, the average number of unemployed persons is estimated at 5 200, down from 6 100 in 2002-03.

Chart 4.5: Unemployment Rate (moving annual average)



Source: NT Treasury, ABS Cat. No. 6202.0

Teenage Unemployed Rate

As reported by the ABS, most teenagers (15-19 years) are in full-time education. A minority of teenagers participate in the full-time labour market, with a relatively large proportion unemployed. In the Territory, the average teenage full-time unemployment rate was estimated at about 15.6 per cent in 2003-04, compared to an estimated 21.3 per cent nationally.

Outlook

State Final Demand

Not surprisingly, there is a broad concordance between growth in Territory State Final Demand (SFD) and employment. As Chart 4.6 shows, weak and strong periods of SFD growth are associated with weak and strong periods of employment growth. Despite the boost to employment that the railway provided in 2001-02, SFD was inflated by the attribution to Territory SFD of work done in other states (for example, steel works undertaken in Whyalla).

Employment

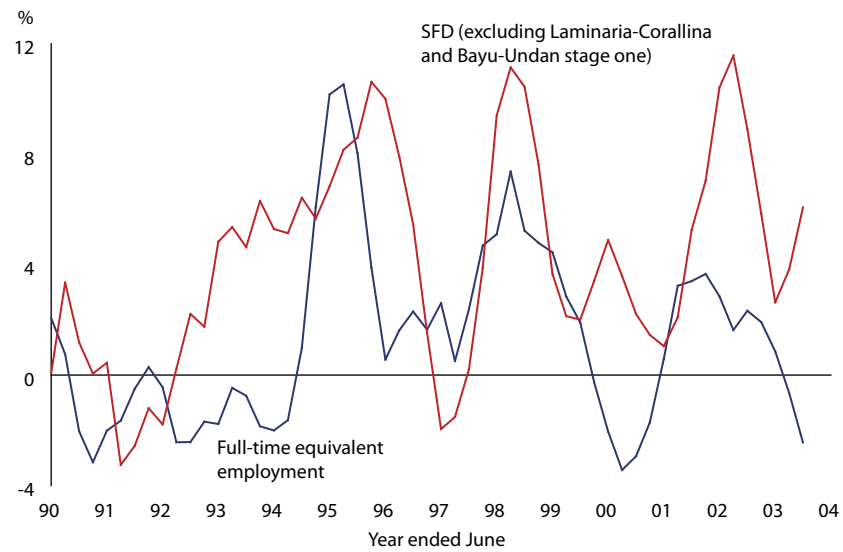
Independent employment market analysts suggest a strong upswing in labour demand. To facilitate local skills development and employment opportunities, the Territory Government has expanded training incentives as part of the Jobs Plan NT initiative. The initiative is expected to provide support for 7 000 apprentices and trainees over the next three years.

Employment growth is forecast to strengthen from an estimated negative 1.4 per cent in 2003-04 to 2.9 per cent in 2004-05, supported by continued strength in non-residential construction investment associated with the \$2.8 billion Bayu-Undan stage two LNG plant and pipeline project. The project will require a significant number of workers to be sourced from interstate due to the specialised skill requirements of the workforce. While some of the workforce for this project will be based locally, a significant proportion is likely to be employed on a fly-in fly-out basis and is therefore unlikely to be captured in resident-based Territory employment estimates from the Labour Force Survey.

Employment growth will also be supported by non-residential building for projects such as the new bulk fuel and liquids terminal at East Arm near Darwin, expansions at Robertson Barracks for the 1st Aviation Regiment and the start of work for the Darwin Convention and Exhibition Centre. Residential building is also forecast to increase in 2004-05, and tourism-related employment is expected to contribute to growth as the world economy and international visitor arrivals continue to recover. In the longer term, employment opportunities associated with the operational phase of the Adelaide to Darwin railway should also emerge.

Employment

Chart 4.6: State Final Demand and Full-time Equivalent Employment Growth (moving annual total, annual percentage change)



e: estimate f: forecast
Source: NT Treasury, ABS Cat. Nos 6202.0, 5206.0